THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3438

Subject: Managing Federal Energy Resources and Protecting the Environment

Sec. 1. **Purpose**. This Order directs the Department of the Interior (Department), consistent with the Federal Land Policy and Management Act (FLPMA) and the Outer Continental Shelf Lands Act (OSCLA), to optimize the use of lands under its direct management, including the Outer Continental Shelf, (hereafter referred to collectively as "Federal lands") by considering, when reviewing a proposed energy project under the National Environmental Policy Act (NEPA), a reasonable range of alternatives that includes projects with capacity densities meeting or exceeding that of the proposed project. For the purposes of this Order, capacity density is defined as the nameplate generation capacity of an energy project multiplied by its projected capacity factor, the product of which is then divided by the total acres of the project area. Ultimately, FLPMA's multiple use mandate for onshore lands, OCSLA's multiple requirements for offshore activities, and NEPA's requirement to consider reasonable alternatives to a proposed action give rise to the question on whether the use of Federal lands for *any* wind and solar projects is consistent with the law, given these projects' encumbrance on other land uses, as well as their disproportionate land use when reasonable project alternatives with higher capacity densities are technically and economically feasible. This Order is consistent with Executive Order (EO) 14156, entitled "Declaring a National Energy Emergency," which directs the Department to exercise its authorities "to facilitate the identification, leasing, siting, production, transportation, refining, and generation of domestic energy resources, including, but not limited to, on Federal lands," and EO 14315, entitled "Ending Market Distorting Subsidies for Unreliable, Foreign-Controlled Energy Sources," which finds, "The proliferation of [wind and solar] projects displaces affordable, reliable, dispatchable domestic energy sources, compromises our electric grid, and denigrates the beauty of our Nation's natural landscape."

Sec. 2. **Authorities**. This Order is issued under the authority of section 2 of the Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended; FLPMA (43 U.S.C. §§ 1701 *et seq.*); OCSLA (43 U.S.C. §§ 1331 *et seq.*); NEPA (42 U.S.C. §§ 4331 *et seq.*); EO 14156; and EO 14315.

Sec. 3. **Background**. The Department, via the Bureau of Land Management (BLM), manages 245 million surface acres, which is approximately one-tenth of our Nation's land base. Additionally, the Department manages 3.2 *billion* acres on the Outer Continental Shelf. Under FLPMA, the BLM must manage Federal lands in accordance with multiple use. Specifically, the BLM shall make "the most judicious use of the land for some or all of these resources" and consider "the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values." 43 U.S.C. § 1702(c). Similarly, under OCSLA, the Secretary must ensure that any activity on the Outer Continental Shelf provides for:

- "safety;"
- "protection of the environment," including fisheries, marine mammals, migratory birds, and bald and golden eagles;
- "conservation of the natural resources of the outer Continental Shelf;"
- "coordination with relevant Federal agencies," including the U.S. Department of Defense, the U.S. Department of Transportation, and the U.S. Department of Commerce;
- "protection of national security interests of the United States," including impacts on airports;
- "prevention of interference with reasonable uses," including commercial fishing; and
- "consideration of…any other use of the sea or seabed, including use for a fishery, a sealane, a potential site of a deepwater port, or navigation [.]" 43 U.S.C. § 1337(p)(4).

To ensure the Department optimizes the use of its Federal lands in accordance with these statutes and to "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences" as directed by NEPA, 42 U.S.C. § 1331(b), the Department shall consider energy projects' capacity density in its decision-making, including when considering reasonable alternatives to a proposed energy project. Capacity density is a technology-neutral, objective calculation of how efficiently land is used for energy generation. Simply put, higher capacity density means greater energy generation with less impact to Federal lands. Because energy projects with higher capacity densities have lower Federal land use impacts and therefore disturb far less of the natural environment for fish, birds, and other wildlife, they provide more Federal lands for other uses, fulfilling FLPMA's multiple use mandate and OCSLA's multiple requirements for offshore activities. Moreover, consideration of a project's capacity density better informs the Department and the public of a project's potential environmental impact and energy generation.

Based on common sense, arithmetic, and physics, wind and solar projects are highly inefficient uses of Federal lands. On a technology-neutral basis, wind and solar projects use disproportionate Federal lands relative to their energy generation when compared to other energy sources, like nuclear, gas, and coal. For instance, based on data from the U.S. Energy Information Administration, one advanced nuclear plant (2 x AP1000) produces 33.17 megawatts (MW) per acre, while one offshore wind farm produces approximately 0.006 MW/acre, which is approximately 5,500 times less efficient than one nuclear plant. *See* Appendix. Thus, when there are reasonable alternatives that can generate the same amount of or more energy on far less Federal land, wind and solar projects may unnecessarily and unduly degrade Federal lands.

Considering capacity densities in the Department's decision-making process, including when assessing alternatives to a proposed energy project, also addresses the artificially stimulated proliferation of intermittent energy sources, namely wind and solar projects, as identified by EO 14315. Such proliferation has displaced dispatchable energy sources and destabilized our electric grid, leading President Trump to declare a national energy emergency due to the unusual and extraordinary threat to our Nation's economy, national security, and foreign policy posed by the Nation's insufficient energy production, transportation, refining, and generation. As the U.S. Department of Energy's report titled "Evaluating the Reliability and Security of the United States

Electric Grid," (July 2025) notes, the Nation's energy grid outlook has been undermined by "the accelerated retirement of existing [baseload] generation capacity and the insufficient pace of firm, dispatchable generation additions (partly due to a recent focus on intermittent rather than dispatchable sources of energy)."

Sec. 4. **Directives**. Consistent with the aforementioned statutory authorities, the Department shall only permit those energy projects that are the most appropriate land use when compared to a reasonable range of project alternatives.

To implement this directive and to the extent that the following information is not already requested by Secretary's Order 3437, titled "Ending Preferential Treatment for Unreliable, Foreign-Controlled Energy Sources in Department Decision-Making," the Department shall identify and make the necessary revisions, as appropriate and consistent with applicable law, to any regulations, guidance, policies, or practices, necessary to implement this directive.

a. Within 30 days of the issuance of this Order, each Assistant Secretary, in coordination with the Solicitor, shall submit a report to the Office of the Secretary a list of the actions taken and to be taken to implement this directive,

b. Within 60 days of the issuance of this Order, the Office of the Secretary, in coordination with the Deputy Secretary, the Solicitor, and each Assistant Secretary, shall submit to me a report on the actions taken and to be taken to implement this directive.

Sec. 5. **Implementation**. The Office of the Secretary is responsible for implementing all aspects of this Order, in coordination with the Deputy Secretary, the Solicitor, and applicable Assistant Secretaries or their equivalents.

Sec. 6. **Effect of This Order**. This Order is intended to improve the internal management of the Department; to comply with FLPMA, OCSLA, and NEPA; and to implement EO 14156 and EO 14315. This Order and any resulting reports or recommendations are not intended to, and do not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7. **Effective Date**. This Order is effective immediately and will remain in effect until it is amended, superseded, or revoked, whichever occurs first.

Secretary of the Interior

Date: Aug 1st, 2025

APPENDIX 1

Energy Type[a]	Capacity Density (MW/Acre)	Different Energy Types' Capacity Densities Compared to…		
		Solar PV with Single-Axis Tracking	Onshore Wind	Offshore Wind
Advanced Nuclear Plant (2 x AP1000)	33.17	945	2686	5402
Combined Cycle Plant 2x2x1	24.42	696	1977	3977
Small Modular Reactor Nuclear Power Plant	12.66	361	1025	2062
Combined Cycle Plant 1x1x1, Single Shaft	12.48	355	1010	2032
Combined Cycle Plant 1x1x1, Single Shaft, with 95% Carbon Capture	5.40	154	438	880
Combustion Turbine – Simple Cycle Plant (H-Class)	4.23	121	343	689
Combustion Turbine – Simple Cycle Plant (Aeroderivative)	2.13	61	173	347
Ultra-Supercritical Coal Plant without Carbon Capture	0.69	20	56	113
Ultra-Supercritical Coal Plant with 95% Carbon Capture	0.64	18	52	105
Geothermal	0.16	4.63	13	26
Solar PV with Single-Axis Tracking and AC-Coupled Battery Storage	0.04	1.16	3	7
Solar PV with Single-Axis Tracking and DC-Coupled Battery Storage	0.04	1.03	3	6
Solar PV with Single-Axis Tracking	0.04	-	3	6
Onshore Wind[b]	0.01	0.35	-	2
Offshore Wind[c]	0.006	0.17	0.5	-

[a] For all energy types other than onshore and offshore wind, the capacity density was calculated using data from the U.S. Energy Information Administration, U.S. Department of Energy, "Capital Cost and Performance Characteristics for Utility-Scale Electric Power Generating Technologies," January 2024, 5-6, 15, 21, 27, 34, 41-42, 48, 63, 67-68, 73, 98, 103-104, 109, https://www.eia.gov/analysis/studies/powerplants/capitalcost/pdf/capital_cost_AEO2025.pdf; and "Table 6.07.A. Capacity Factors for Utility Scale Generators Primarily Using Fossil Fuels," 2024 annual data, U.S. Energy Information Administration, U.S. Department of Energy, accessed July 31, 2025, https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_6_07_a.

[b] To calculate the capacity density for onshore wind, the midpoint of 4.1 - 13.7 MW/km^2 (0.0166 - 0.0555 MW/acre), or 0.036 MW/acre, was used. This number was then multiplied by a capacity factor of 34.3 percent, with the product being approximately 0.01 MW/acre. See Trieu Mai et al., "Land of Opportunity: Potential for Renewable Energy on Federal Lands," National Renewable Energy Laboratory, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy, January 2025, 25, https://docs.nrel.gov/docs/fy25osti/91848.pdf; and "Table 6.07.B. Capacity Factors for Utility Scale Generators Primarily Using Non-Fossil Fuels," 2024 annual data, U.S. Energy Information Administration, U.S. Department of Energy, accessed July 31, 2025, https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_6_07_b.

[c] To calculate the capacity density for offshore wind, 4.42 MW/km^2 was used and converted to 0.0179 MW/acre and then multiplied by a capacity factor of 34.3 percent. See Daniel Mulas Hernando et al., "Summary Analysis of Different Offshore Wind Capacity Density Drivers in Proposed U.S. Projects and Impacts on Progress Towards State and Federal Deployment Targets," National Renewable Energy Laboratory, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy, October 2023, 9, https://docs.nrel.gov/docs/fy24osti/87947.pdf; and "Table 6.07.B. Capacity Factors for Utility Scale Generators Primarily Using Non-Fossil Fuels," 2024 annual data, U.S. Energy Information Administration, U.S. Department of Energy, accessed July 31, 2025, https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_6_07_b.